



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/848,756	05/19/2004	Kenichi Nishiuchi	10873.0647USC1	4650
7590	09/15/2006		EXAMINER PATEL, GAUTAM	
Hamre, Schumann, Mueller & Larson P.C. P.O. Box 2902-0902 Minneapolis, MN 55402			ART UNIT 2627	PAPER NUMBER

DATE MAILED: 09/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/848,756

Applicant(s)

NISHIUCHI ET AL.

Examiner

Gautam R. Patel

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 4, 6, 12 and 24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2, 4, 6, 12 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-2, 4, 6, 12 and 24 are pending for the examination.

RCE STATUS

2. The request filed on 8/4/06 for Request for Continued Examination (RCE) under 37 CFR 1.114 based on parent Application is acceptable and a RCE has been established. An action on the RCE follows.

Claim Rejections - 35 U.S.C. § 103

3. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 4-6 12 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choi US patent 5,428,597 (hereafter Choi), in view of Tanaka JPO Publication 10-112066 (hereafter Tanaka).

As to claim 1, Choi discloses the invention as claimed [see Fig. 3.], including plurality of information layers, a separating layer and sector structure with addresses, comprising:

A plurality of information layers [fig. 3, layers 310, 320, 330 & 340] from which information signals can be reproduced by one-sided irradiation [fig. 3, side showing two arrows pointing down] of light beams [beams λ_1 & λ_2] [fig. 3],

wherein at least the information layers except for the most distant information layer [fig. 3, layer 340] from an incident side [fig. 3, direction of the two arrows] of the light beams are semi-transmissive to the light beams,

a separating layer [fig. 3, layer 312] that is transparent to a wavelength of the light beams is formed between the information layers [col. 7, lines 17-47],

each information layer has a sector structure including a sector address and a data area that are divided in a circumferential direction [inherently present in all disks when you have read and write on the layers] [col. 7, line 14 to col. 8, line 52].

Choi discloses all of the above elements, including several layers of information storage, a separating layer that is transparent to a wavelength. Choi does not specifically disclose that each information layer has same number of sector addresses in circumferential direction, and position of these addresses coincides in both the circumferential and radial direction.

However, use of the coincident address position between layers is well known in the art. And more importantly, Tanaka clearly discloses:

each information layer has a sector structure including a sector address and a data area that are divided in a circumferential direction, and

position of the sector addresses of the respective information layers coincide in both the circumferential direction and radial direction [fig. 1, & paragraphs 5-17].

Both Choi and Tanaka are interested in improving the multi-layered disk storage in an optical disk device with minimum management area and plural wavelength recording .

One of ordinary skill in the art at the time of invention would have realized that the system of Choi may be susceptible to crosstalk [leakage] and it would be advantageous to prevent cross talk between the layers and neighboring tracks.

Therefore, it would have been obvious to have used a coincident structure of addresses and data area in the system of Choi as taught by Tanaka because one would be motivated to provide higher density recording on plural disk and reduce the crosstalk between layers and between tracks at the same time and thus improve the quality of the read/write function [paragraphs 17-18].

4. The aforementioned claim 2, recites the following elements, inter alia, disclosed in Choi:

The plurality of information layers comprise a first information layer [fig. 3, layer 310] that is formed on the first substrate [fig. 3, layer 312] and transmits part of the light beams [λ_2] and a second information layer [fig. 3, layer 320] that is formed on the second substrate [fig. 3, layer 322],

the first information layer and second information layer are bonded together with the transparent separating layer so that the sector position identifiers of the two information layers have certain relationship] [col. 7, line 14 to col. 8, line 52].

As to rest of the claim Satoh discloses:

position identifier [fig. 8, ID_{L1}, ID_{L2} etc.] is provided in each of the first and second information layers [col. 5, lines 27-46].

5. As to claim 4, it rejected for the similar reasons as claim 1, supra.
6. As to claim 6, it rejected for the similar reasons as claim 4, supra.
7. As to claim 12, it rejected for the similar reasons as claim 1, supra.
8. The aforementioned claim 24, recites the following elements, inter alia, disclosed in Tanaka:

the position of the sector addresses of the respective information layers coincide in a radial direction [fig. 1, & paragraphs 5-17].

9. Applicant's arguments with respect to above claims have been considered but are moot in view of the new grounds of rejection.

NOTE: Tanaka was presented in previous actions.

Contact information

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gautam R. Patel whose telephone number is 571-272-7625. The examiner can normally be reached on Monday through Thursday from 7:30 to 6.

The appropriate fax number for the organization (Group 2600) where this application or proceeding is assigned is 571-273-8300.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Dwayne Bost, who can be reached on (571) 272-7023.

Any inquiry of a general nature or relating to the status of this application should be directed to the Electronic Business Center whose telephone number is 866-217-9197 or the USPTO contact Center telephone number is (800) PTO-9199.



Gautam R. Patel
Primary Examiner
Group Art Unit 2627

September 11, 2006